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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,492	12/26/2001	Hiroyuki Hattori	02860.0700	7896

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EXAMINER

LAVARIAS, ARNEL C

ART UNIT PAPER NUMBER

2872

DATE MAILED: 03/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/025,492

Applicant(s)

HATTORI ET AL.

Examiner

Arnel C. Lavarias

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) 6-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other:

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-5, drawn to an optical element molded between a first die and a second die which are jointed along a partition line, comprising a first optical surface, a second optical surface, and a flange, classified in Class 359, subclass 566.
  - II. Claims 6-8, drawn to a method of producing an optical element by a molding die, comprising the steps of jointing the first and second die, injecting a resin, separating the second die from the first die, and removing the molded optical element from the first die, classified in Class 264, subclass 1.7.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product as claimed can be made by another and materially different process, such as by a combination of lithography and etching, or by stamping.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

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4. Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group I, restriction for examination purposes as indicated is proper.
5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.
6. During a telephone conversation with David W. Hill (571-203-2735) on 3/13/03 a provisional election was made without traverse to prosecute the invention of Group I, Claims 1-5. Affirmation of this election must be made by applicant in replying to this Office action. Claims 6-8 are withdrawn from further consideration by the Examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.
7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### *Drawings*

8. The drawings are objected to because of the following informalities:
  - ✓ Figures 1, 3- Reference numeral '12b' (below reference numeral '10b') should read '12a'.
  - ✓ Figures 6, 7- these Figures are not mentioned in the specification of the disclosure.

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A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

*Specification*

9. The disclosure is objected to because of the following informalities:

- ✓ The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Appropriate correction is required.

*Claim Rejections - 35 USC § 102*

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1, 3-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Meyers.

Meyers discloses an optical element molded between a first die and a second die which are jointed along a partition line (See Figures 2 and 24), comprising a first optical surface on which a diffractive structure is provided (See 3 of Figure 2; S2 of Figure 24 for example); a second optical surface being a refractive surface opposite to the first optical surface (See 1 of Figure 2; S1 of Figure 24 for example); a flange having a flange surface provided around a periphery of the optical element (See upper and lower edge

portions of element 10 in Figure 2; see upper and lower edge portions of molded element in Figure 24), a first edge portion of the flange surface adjoining to the first optical surface and a second edge portion of the flange surface adjoining to the second optical surface (See Figure 2 specifically), wherein the second edge portion is positioned at the partition line between the first die and the second die (See Figure 24 specifically; in the instant case, S1 is the second surface, and the second edge portion, which adjoins S1, is positioned at the partition line between the first die and the second die). Meyers additionally discloses the optical element having an optical axis (See O.A. of Figure 1) and the flange surface being parallel to the optical axis (See Figure 1 or 2), and the diffractive structure of the first optical surface being shaped in a plurality of ring-shaped diffractive zones (See Figures 2 and 3 for example), such as a plurality of ring-shaped steps (See 3 in Figure 4; Figure 5A).

### ***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meyers in view of Maruyama.

Meyers discloses the invention as set forth above in Claim 1, except for the flange having a side surface at the second edge portion and the side surface being tapered from

the second edge portion. However, Maruyama teaches a method for designing a diffractive lens (See Figure 1a-c) wherein the optical element includes a flange (See upper and lower edge of optical element of Figure 1b, specifically the edge in the region near 10) having a side surface at the second edge portion and the side surface being tapered from the second edge portion (See tapered flange sections on upper and lower edge of optical element of Figure 1b, particularly the edge to the left of 12). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the flange have a side surface at the second edge portion and the side surface be tapered from the second edge portion, as taught by Maruyama, in the molded optical element of Meyers for the purpose of providing additional mounting stability and additional surface area for handling of the optical element.

14. Claims 1, 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nisper et al. in view of Ueda et al.

Nisper et al. discloses an optical element molded between a first die and a second die which are jointed along a partition line (See Figures 5 and 6), comprising a first optical surface on which a diffractive structure is provided (See upper diffractive surface of Figure 6 for example); a second optical surface being a refractive surface opposite to the first optical surface (See lower curved surface of Figure 6 for example); the edge of the optical element is positioned at the partition line between the first die and the second die (See partition line dividing die 504 and die 506 in Figure 5); the optical element having an optical axis (in the instant case, the optical axis is vertical for the optical element shown in Figure 6; and the diffractive structure of the first optical surface being shaped in

a plurality of ring-shaped diffractive zones , such as a plurality of ring-shaped steps (See Figures 1A-C). Nisper et al. lacks a flange having a flange surface provided around a periphery of the optical element, a first edge portion of the flange surface adjoining to the first optical surface and a second edge portion of the flange surface adjoining to the second optical surface, wherein the second edge portion is positioned at the partition line between the first die and the second die and the flange surface is parallel to the optical axis. However, Ueda et al. teaches a lens manufacturing method (See Figures 4-6) wherein an optical element (See 20 in Figure 5) is molded between two die, and the optical element includes a flange surface provided around a periphery of the optical element (See upper and lower edge of optical element in Figure 4), a first edge portion of the flange surface adjoining to the first optical surface and a second edge portion of the flange surface adjoining to the second optical surface, wherein the second edge portion is positioned at the partition line between the first die and the second die and the flange surface is parallel to the optical axis (defined horizontally through the optical element in Figure 4). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have a flange having a flange surface provided around a periphery of the optical element, a first edge portion of the flange surface adjoining to the first optical surface and a second edge portion of the flange surface adjoining to the second optical surface, wherein the second edge portion is positioned at the partition line between the first die and the second die and the flange surface is parallel to the optical axis, as taught by Ueda et al., in the molded optical element of Nisper et al., for the purpose of providing a mounting and handling surface for the optical element, thus



improving mounting stability and lessening the chances of spoiling the optical surfaces due to contact.

15. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nisper et al. in view of Ueda et al. as applied to Claim 1 above, and further in view of Maruyama.

Nisper et al. in view of Ueda et al. discloses the invention as set forth above in Claim 1, except for the flange having a side surface at the second edge portion and the side surface being tapered from the second edge portion. However, Maruyama teaches a method for designing a diffractive lens (See Figure 1a-c) wherein the optical element includes a flange (See upper and lower edge of optical element of Figure 1b, specifically the edge in the region near 10) having a side surface at the second edge portion and the side surface being tapered from the second edge portion (See tapered flange sections on upper and lower edge of optical element of Figure 1b, particularly the edge to the left of 12). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the flange have a side surface at the second edge portion and the side surface be tapered from the second edge portion, as taught by Maruyama, in the molded optical element of Nisper et al. in view of Ueda et al. for the purpose of providing additional mounting stability and additional surface area for handling of the optical element.

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*Conclusion*

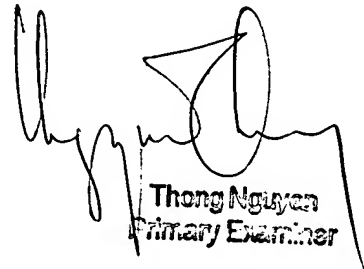
16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnel C. Lavarias whose telephone number is 703-305-4007. The examiner can normally be reached on M-F 8:30 AM - 5 PM.

The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.



Arnel C. Lavarias  
March 18, 2003



Thong Nguyen  
Primary Examiner